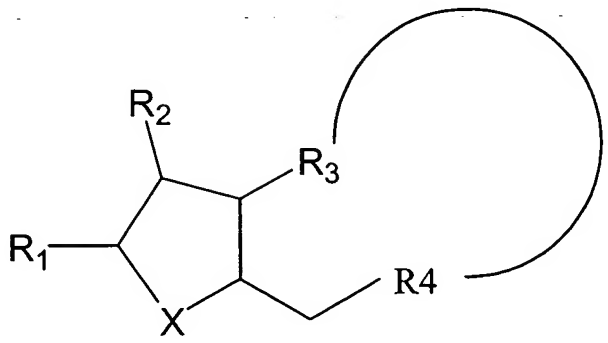
We claim:

1. Furanose-type macrocyclic carbohydrate compounds having the formula



wherein R_1 is selected from the group consisting of alkyl, aryl, O-aryl, S-aryl, OH, O-alkyl, SH, S-alkyl, NH_2, N_3, halogens, -OOCH, and COOH;

wherein R_2 is selected from the group consisting of H, hydroxyl, aliphatic and aromatic ethers and esters;

wherein R_3 is selected from the group consisting of alkyl, aryl, O-aryl, S-aryl, OH, O-alkyl, SH, S-alkyl, NH_2, N_3, halogens, -OOCH, COOH, and acetal rings;

wherein R_4 is selected from the group consisting of alkyl, aryl, O-aryl, S-aryl, OH, O-alkyl, SH, S-alkyl, NH_2, N_3, halogens, -OOCH, COOH, and acetal rings; and

wherein X is selected from the group consisting of O, N and S.

2. A compound as defined in claim 1, wherein R_1 is preferably phenyl; R_2 is preferably selected from the group consisting of -OMe, -OH, and -H; R_3 is preferably selected from the group consisting of -OH. -OAc, -OH, -OBn, and -H; and R_4 is preferably selected from the group consisting of -H, -OAc, and -OBn; or a pharmaceutically active derivative thereof.

3. A compound as defined in claim 1, wherein R_1 and R_2 form a ring and are -$OC(CH_3)_2O$-.

4. A compound as defined in claim 1, wherein R_3 and R_4 form a ring and are preferably selected from the group consisting of -OSi(*i*-Pr)$_2$OSi(*i*-Pr)$_2$O- and -OCH(Ph)O-.

5. A method of treating a viral infection in a mammalian subject comprising the step of administering to the subject a composition comprising at least one compound of claim 1.

6. The method of claim 5 wherein the composition contains a compound of claim 1 in an effective anti-viral amount.

7. The method of claim 5 wherein the mammalian subject is a human patient or another mammal.

8. A method as defined in claim 3, wherein the viral infection is an infection caused by Cytomegalovirus.